Amendments to the Specification

Please replace the paragraph beginning on page 9, line 25 with the following amended paragraph:

The step of building the modified network should be understood as conversion of the given plurality of links, where each link has two real parameters with arbitrary values, into an extended plurality of real and fictitious links where each link also has two real D-parameters, but one of them is constant for said modified plurality (CDV-minCDV). The other D-parameter (maxCTD) has its value on any real link, and if a particular real link is divided into a number of fictitious links, the first fictitious link of the real link may be stated to have the maxCTD value equal to that of the real link, so the remaining fictitious links will have maxCTD=0. Other parameters' values are also arranged in all the fictitious links to adequately represent the replaced link.

Please replace the paragraph that begins on page 12, line 19 with the following amended paragraph:

Fig. 2 illustrates two graphs, which will further be explained using the following mathematical expressions. In this example, for calculating cost of link [i] we use a ~~weighed~~ weighted equation:

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Please replace the paragraph that begins on page 14, line 11 with the following amended paragraph:

It has been proposed and further proven by the Inventor that function A is a monotonous non-increase function of the variable R, and function B is a monotonous non-decrease function of the same variable R. In view of the above finding, and keeping in mind that the maximal value of the QoS limitation $MaxCTD_{QoS}$ is set in the user's request, (see the required $MaxCTD_{QoS}$ value marked in Fig. 2 on the vertical axis), the task is to allocate such a value of the argument R, at which function A $MaxCTD_{QoS}$, while function B is minimal. The determined value of the argument R* will define the particular ratio of importance ~~(weighs)~~ (weights) between the D-parameters and non-D-parameters of a link at which the selected shortest path is optimal.